

The College Ladder:

Linking Secondary and Postsecondary Education for Success for All Students

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Executive Summary

Much has been written about the failure of many American high schools to adequately prepare a large percentage of young people for college, work, and citizenship. The most prevalent figures state that only 70% of students nationally complete high school (Barton, 2005, p.3); of those, only 53% enter college directly from high school and only 35% earn a degree (Adelman, 2006b, p. 11).

Since the current design of high school is effective for only a small percentage of youth, it makes sense for communities to offer other options and choices to help youth succeed. One option to increase rigor and motivate students that has been gaining favor is to allow high school students to take college-level courses. Arrangements that allow high school students to participate in college classes come in many forms and designs, including dual enrollment, Advanced Placement (AP) courses, Tech Prep, and middle and early college high schools. They share important common elements of strong academics keyed to postsecondary standards, increased student engagement through interesting classes and/or attendance on a college campus, and exposure to adult expectations and milieu, and often are accompanied with supports to ensure student success. From our perspective, these programs are high value programs, because they provide many of the important elements that have been missing from high school for most students: challenge, engagement, access to the adult world, and support.

The College Ladder: Linking Secondary and Postsecondary Education for Success for All Students is the result of a two-year effort to identify, summarize, and analyze schools, programs, and policies that link secondary and postsecondary education to help students earn college credit or take college-level courses. To be inclusive of the variety of models and programs that link secondary and postsecondary education, AYPF will use the term **Secondary-Post-Secondary Learning Options** (SPLOs). AYPF focused on identifying SPLOs serving first-generation, low-income, and low-performing students, students with disabilities, and underrepresented minorities.

Purpose

This compendium is designed to help national, state, and local policymakers and practitioners better understand what SPLOs are, the various ways they are structured, and their impact on student outcomes. By helping policymakers gain a better understanding of successful or effective interventions, they can implement policies that will support student preparation for and access to postsecondary education. By profiling SPLOs, practitioners can learn what models and strategies are effective with various student populations.

AYPF's efforts were driven by the following guiding questions:

- Is there evidence that these different models of SPLOs are effective at increasing academic performance, closing the achievement gap, and increasing entry to and retention in postsecondary education, particularly for first-generation, low-income, or students of color and students with disabilities?
- Do financing mechanisms support equity and access by all students? Is there evidence that these programs are cost effective?
- Are college courses for high school students as rigorous and at the same level as regular college courses?
- What evidence exists to demonstrate that these programs meet their respective goals of serving a specific target population or solving a specific problem?

Secondary-Postsecondary Learning Options (SPLOs) are schools and programs that link secondary education with two- and four-year institutions of higher education and allow high school students to participate in college-level courses for credit and not for credit.

- Who should pay for high school students to take these courses and what are some of the financing structures? Should federal student aid dollars be used to support high school students?
- On what outcomes should these programs be measured: high school graduation or grades, attainment of college credit, entry to postsecondary education, and/or completion of degree?

Unfortunately, due to limitations in the data, AYPF was unable to answer many of these questions. More specifically, we were unable to gather enough data to answer questions about specific categories of students. Instead, the available data allowed us to consider the following program characteristics and issues: type of student served; sources of funding; course rigor, as it is related to program location, teacher and faculty preparation, prerequisites for participation, and program length; extra supports; formal sanctioning; transferability of credit; and data.

Programs Reviewed

AYPF undertook an extensive literature review to identify research, evaluations, and studies on SPLOs. Programs in this compendium either have a third-party evaluation or have participated in a semirigorous data collection effort. Twenty-two programs were identified as meeting our criteria and have been categorized by program type described below.

Dual Enrollment

Dual enrollment includes programs that provide opportunities for high school students to participate in college-level coursework in hopes of earning postsecondary credit. Programs are offered both on campuses of colleges or universities or in high school classrooms. Within this compendium, the dual enrollment section includes institution-specific dual enrollment programs, Advanced Placement (AP),¹ and statewide dual enrollment programs with an emphasis on implementation at one site.

Tech Prep

Tech Prep is a planned sequence of study in a technical field that typically provides students the opportunity to earn postsecondary credit toward a technical certificate or diploma. Tech Prep is funded under the Carl D. Perkins Vocational and Technology Education Act through federal grants to states.

Middle/Early College High Schools

Both middle and early college high schools are located on or near a campus of a postsecondary education institution. Both types of schools supplement their course offerings by enrolling students in college courses for both secondary and postsecondary credit. Middle college high schools graduate students with a high school diploma and some postsecondary credit; early college high schools encourage students to remain for a fifth year to graduate with both a high school diploma and an associate's degree.

Programs Serving Disadvantaged Youth

A number of SPLOs are targeted at out-of-school or disadvantaged youth and provide an opportunity for them to participate in challenging, college-level coursework with appropriate support. Most of these programs are designed and operated by community colleges or community-based organizations in partnership with an institution of postsecondary education.

College Access Programs

A number of programs focused on college access also provide an opportunity for their students to enroll in postsecondary coursework. These programs typically do not offer their own SPLOs, rather they encourage students to participate in existing SPLOs. The compendium provides short descriptions of these programs and some information on their outcomes, but does not consider them with the results of the 22 evaluations.

Outcomes

The evaluations included in this compendium considered a variety of outcomes at both the secondary and postsecondary levels. Only a limited number of the included evaluations have longitudinal data; instead, most have outcome data at a specific point in time, such as at high school graduation or after one semester or one year of postsecondary education. While these outcomes are useful, they do not provide a complete understanding of the long-term effects of participation in a SPLO. None of the evaluations in the compendium considers all the outcomes listed below, and most only collected data on three to six outcome measures. Moreover, very few (approximately 15%) of the included evaluations were able to compare these outcomes to a control group to determine statistical significance.

Credits earned during high school

Of the 22 programs in the compendium, over half were able to provide the number of credits students earned while in high school. Unfortunately, the evaluations typically do not indicate whether these credits are transferable to the postsecondary education institutions that students subsequently attended. Credits earned ranged from zero credits (for students who participated in a course, but did not earn a grade eligible for credit) up to two years worth of credit, equivalent to an associate's degree.

High school standardized tests

Seven of the evaluations included results of SPLO students' scores on state-mandated tests during high school. Often, these results were compared to students in the district not participating in the SPLOs to demonstrate that SPLO students were outscoring their peers.

High school completion

Eleven of the included SPLOs, particularly those serving formerly out-of-school youth, reported their high school completion rates. High school graduation was important for this population as it potentially was the only credential that students would receive. Other SPLOs, such as some of the Tech Prep programs and the middle and early college high schools, reported their dropout rates and attendance rates, which typically were better than the district from which they drew students. Since some of the included SPLOs were targeting out-of-school youth or students who were at risk of dropping out, there is some evidence that SPLOs helped to decrease the district's overall dropout rate.

College-going rates

College-going rates are important, particularly for students who had not anticipated going to college prior to participation in a SPLO. Of the included evaluations, 15 provided information on either the percentage of graduates that enrolled or planned to enroll in postsecondary education upon completion of high school. On average, college-going rates for SPLO participants, especially middle- and low-achieving students, were higher than for nonparticipants. College-going rates are a good indicator that SPLOs are increasing access and participation in higher education for historically underserved student populations.

College placement tests

Six evaluations included college placement test scores when students applied to participate in a SPLO or once they became a fully matriculated student after participation in a SPLO. The pre-program test scores were often used as admissions criteria for SPLOs and served as a qualifier for participation in credit-bearing courses. A few evaluations included scores on placement tests administered once a student matriculated to an institution of higher education. Typically, students demonstrated mastery on these assessments and subsequently were placed into nonremedial, credit-bearing courses. Data indicate there were some students with prior credit, mainly in technical areas, who were unable to meet standards for nonremedial courses, usually academic courses. Typically, the technical or vocational courses did not require students to demonstrate the same level of mastery in core subject areas such as English or math.

College course grades/GPA

Nine of the included evaluations gathered information on students' grades and GPAs when they participated in a SPLO or when they enrolled in postsecondary education. Both these indicators are helpful in understanding the value of SPLOs. SPLO participants' grades and GPAs in college-level courses indicate whether students were adequately prepared and appropriately screened for participation. Some evaluations compared the course grades of high school students dually enrolled in college courses with those of traditional college students. These results indicated that high school students participating in these programs typically did as well or better than their traditional-aged classmates. Consideration of student participants' grades upon matriculation, particularly in subject areas where students had earned prior credit, is an indication of how well the SPLO courses prepared students for the rigors of college courses. On the whole, the information from the evaluations demonstrate that SPLOs are generally selecting students who are academically-prepared for rigorous college-level coursework and ensuring their course offerings are rigorous enough to prepare them for future college courses.

Retention

Five of the evaluations include student retention data for SPLO participants compared to data for nonparticipants in a college or university's first-year class.

Unfortunately, only two studies look at retention rates beyond the first semester or first year. The other three included retention data indicating that SPLO participants are more likely to persist from their first semester to their second semester and from their first year to their second, inferring that students with some experience with college-level courses are able to make an easier transition into higher education.

Degree attainment/time to degree

There are six evaluations that follow SPLO participants to college graduation or degree attainment; however, middle and early college high schools are not included in this outcome because data on this outcome were not available for them. There is limited information on the time it takes SPLO participants to complete a degree. One of the included programs makes a claim of cost savings because of shortened time, but there is no convincing evidence that SPLOs shorten time to degree, or that participating in a SPLO results in significant cost savings.

Job market outcomes

Five of the evaluations included self-reported job market outcomes. These evaluations were focused on students who had received technical training and/or occupational certificates through SPLOs. Two evaluations indicated that students with technical training received during high school through the SPLO were earning more than their peers who had not received specialized training. If not self-reported, job market outcomes are the most difficult to collect because they require tracking students from a postsecondary education data system into a labor market data system, requiring cross agency collaboration and data sharing, which is not common.

Findings and Lessons Learned

From AYPF's analysis, the following are findings and lessons learned for policymakers, practitioners, researchers, parents, students, and community members to consider to increase the effectiveness of SPLOs.

Type of Student Served

SPLOs are viewed as a strategy to increase postsecondary access for underserved populations.

When SPLOs were first introduced, usually in the form of dual enrollment, they were accessed primarily by academic high achievers. More recently, SPLOs have been viewed as a strategy to increase postsec-

ondary access for underserved populations. One example is the "AP for all" movement, which encourages schools and school districts to open up their AP classes to all interested students. Some programs have made outreach efforts to students who will be the first in their family to attend college. Through the limited available student demographic data, there are indications that some of the middle and early college high schools included in this compendium have served or are serving a large percentage of students who qualify for free or reduced-price lunch. Some alternative education programs with a dual enrollment component included in this compendium also describe serving a similar target population.

Funding

Funding formulas must distribute dollars fairly, so that institutions are paid based on the amount of services they provide to students.

Funding for SPLOs can be a complex equation as students are participating simultaneously in both secondary and postsecondary education. While both secondary and postsecondary education systems typically rely on student headcounts to receive their funding allotments from the state, many questions arise as to how to count SPLO participants. The ideal scenario, according to many participating systems, is for the K-12 system to maintain its full average daily attendance (ADA) funding for students participating in SPLOs (despite their being out of the school building for a period of time each day) and for the institution of higher education to be able to count these students as part-time students in their full-time equivalent (FTE) headcount for state reimbursement. Alternate funding structures involve schools or districts reallocating some of their ADA dollars to the postsecondary institutions where their students are enrolled in courses for dual credit. Other SPLOs rely on the postsecondary education institution to bear the entire financial cost of student.

While many SPLOs have made claims of cost savings for students, families, and taxpayers, AYPF was not able to fully investigate these claims based on the available data, but has provided the available information regarding funding in each profile.²

Course Rigor

SPLOs need to ensure they provide college-level courses and work. Several program elements, including location, faculty preparation, prerequisites,

and program length, contribute to course rigor.

Most SPLOs strive to ensure that the quality of curriculum and instruction meets college-level standards; however, in a number of cases, SPLOs provide classes for high school students that are not at a collegiate level. Because of this, a distinction should be made between “college-level” and “college-like” courses.

AYPF considered a number of characteristics of SPLOs, including program location, faculty preparation, prerequisites for participation, and program length, which we believe contribute to a rigorous experience for students.

Extra Supports

For students to be successful, SPLOs need to provide appropriate experiences and supports to their students based on their individual needs.

To serve their student populations, particularly those less academically qualified, many SPLOs provide a range of extra supports for students. These supports vary from intensive preparatory coursework to advising services. Based on the practices of SPLOs included in this compendium, AYPF has identified the four most common extra supports that have proven effective with middle- and low-achieving students: caring adult advisors, academic assistance and tutoring, college success classes, and a safe environment and peer support network.

Formal Sanctioning

While many states have some state framework to support SPLOs, many SPLOs have grown as a result of flexible local policies.

Currently, 40 states have some state legislation or regulations that sanction or govern dual enrollment or the operation of SPLOs. While many of these policies do not specifically address funding, most provide a framework for the organization of programs and student eligibility requirements.

However, many SPLOs have grown out of flexible local policies that have no formal legislative or regulatory sanctioning. Rather, they exist based on local arrangements and agreements made between a high school and a postsecondary education partner.

Transferability of Credit

Very little data is available on what courses transfer for credit or how students use credit earned from their participation in a SPLO.

Some programs, such as AP, are designed for the col-

lege credit to be extremely portable, as all students are required to take the same test and demonstrate mastery of the same material, no matter where or when the course was taken. In other SPLOs, college credit is not as easily transferable beyond the institution from which it was earned. Course transferability can also be limited by the accepting institution through a cap on the number or type of courses that students are eligible to earn from other institutions. These limitations on transferability could negate some of the benefits of SPLOs and could potentially prove costly to the student.

Collaboration

Collaboration between secondary and postsecondary teachers and administrators helps create a supportive environment for SPLO participants.

SPLO students straddle two educational systems that have very different pedagogies and course content. Effective SPLOs must share responsibility between both secondary and postsecondary education systems to ensure students' needs are being met. Working at the intersection of secondary and postsecondary education requires strong knowledge of both systems.

Policy Considerations

As SPLOs gain favor as a way to help youth succeed, policymakers and practitioners should proceed with some caution as they seek to expand or create programs.

One of our primary goals with this project was to try to answer the question of whether or not SPLOs resulted in savings to families and the public, based on reduced time to degree, by looking at the research and evidence. Unfortunately, that research and evidence does not exist, and from a purely objective perspective, we cannot claim that SPLOs reduce the time to degree or result in savings in any significant manner. What we do see is that students may need fewer credits to graduate, but this may not lead to a reduction in time spent in college.

The included SPLOs also demonstrate that students are earning credits, but questions emerge about what happens to those credits after students graduate from high school. What we see from our review is that many students who earn credits in high school do not use or count those credits for various reasons. Also, students, in general, now take longer to complete both two- and four-year degrees due to financial and personal pressures. However, it appears

that even if credits earned through SPLOs do not necessarily reduce a student's time to degree, they do have a positive effect on the student's likelihood of earning a degree.

While the primary purpose and value of these programs is to provide students with an opportunity to earn college credit, it is evident that many of the programs have served an additional, equally important, purpose: enabling more students to experience college and to believe they are capable of succeeding in postsecondary education. For these students, the goal may not be about shortening time to degree or reducing the number of credits needed for graduation, but simply giving them a new vision that they are as able as any other student to climb the ladder to college, and this may be true particularly for students from low-income or first-generation families.

A number of other key policy considerations were identified, including funding, alignment of programs and systems, equitable access to SPLOs, transferability of credits, quality and accountability, and data collection and research.

Funding

Funding for SPLOs varies significantly across programs and states, and SPLOs rely on contributions from a number of systems at the federal, state, and local levels. As policymakers consider dual enrollment legislation, the funding structure needs to be addressed so that it is clear who is responsible for the cost of a student's participation in a SPLO and to ensure that students, particularly low-income students, have access to these programs. States need to consider whether they should target funding to help all or certain populations of students participating in SPLOs. In addition, the K-12 and the higher education system need to align their policies to ensure adequate and fair cost-sharing for SPLOs. At the federal level, there is limited financial support for students participating in SPLOs; the federal Tech Prep program and Advanced Placement Incentive Program are the exceptions. Some are advocating for the federal government to make federal student financial aid dollars available to needy students during high school to finance SPLOs.

Alignment of Programs and Systems

As evidenced by the number of SPLO participants who need remediation upon matriculation to higher education, it is important to align high school cur-

ricula with college admissions requirements. This will ensure that all students are required to take the foundational classes that prepare students for college-level coursework, and these efforts should begin in the middle grades.

Equitable Access to SPLOs

Although the number of SPLOs has increased in recent years with more students than ever before participating, issues of access to programs continue to persist. Many programs still require students to meet the same admissions criteria as traditional students, which precludes lower-performing students from participating. To compensate for students with limited skills, some SPLOs are beginning to identify potential candidates at younger ages and provide intensive academic support or opportunities to take remedial coursework or preparatory programs on the college campus. Another issue that limits access to SPLOs is location and technology. Policymakers need to consider providing online opportunities and multiple locations for programs, particularly for rural areas.

Transferability of Credits

There are often problems regarding transferability of credits to and between postsecondary education institutions. At most colleges and universities, credit transfer is dealt with on a case-by-case basis, which is costly to the receiving institution and time-consuming to students. Policymakers can aid in the development of common course numbering systems or standardized procedures for credit transfer or acceptance to help avoid many of these problems.

Quality and Accountability

The quality of SPLOs is a subject that was barely addressed in the evaluations we reviewed. Questions were raised in our work about the level of rigor in some SPLOs, and we often ran into the terms "college-level work" and "college-like work"—a significant distinction. Before states or communities move forward with the creation or expansion of SPLOs on a large-scale, policymakers and program administrators need to ask some hard questions about who is overseeing the quality of programs and what measures are being used.

Data Collection, Evaluation, and Research

With limited data, we were not able to answer many of our original questions, and we noted many gaps

in research and evaluation. States have an important role to play in the support, encouragement, and funding of state longitudinal data systems that link K-12 and postsecondary education. These data systems are necessary to determine the effectiveness of SPLOs because they will allow researchers to track students across systems. Program providers must also try to disaggregate student demographic data, and we encourage the use of research techniques that include measures of statistical significance.

Conclusion

There is evidence to support the effectiveness of SPLOs, yet as the field grows, the research must become more rigorous in order to answer additional specific questions on who benefits and in what ways. We learned that SPLOs provide students access to rigorous academics, exposure to the world of college, and an opportunity to imagine a different future—many of the things that are missing from their high school experience. For these reasons, SPLOs should be included in the range of options that communities and educators make available to young people. SPLOs, while in need of further data to measure their success, are indeed improving outcomes for high school-aged youth, and continue to build a strong track record of success.

Notes

- ¹ AYPF recognizes that AP is a unique SPLO, but did not find any evaluations that considered AP alone; thus, it has been categorized with dual enrollment. AP is described in more detail in the Introduction.
- ² For more information on funding and recommendations of funding structures, please see Hoffman, N., (2005, April). *Add and subtract, Dual enrollment as a state strategy to increase postsecondary success for underrepresented students*. Boston, MA: Jobs for the Future.

Advanced Placement and Advanced College Credit at Saint Louis University

Overview

This study compared students who entered Saint Louis University (SLU) with and without prior credit. All of the credit considered was either earned through the Advanced Placement (AP) program or 1818 Advanced College Credit Program (ACC), a program for students in the St. Louis area to take college courses offered through SLU in their home high school. SLU is a highly selective, Jesuit, four-year, private university. The ACC program is often used as a recruiting tool, allowing qualified¹ high school students to earn credit that is valid at SLU and some other select institutions as part of their credited high school coursework. It is important to note that this is one of the only studies within this compendium that followed the student subgroups through college graduation and considered the possibility that prior credit decreases time to degree.

Population

There were a total of 2,760 students in the study: 1,017 entered as first-year students in the fall of 1989, 917 in the fall of 1990, and 826 in the fall of 1991. Of these three cohorts, 644 entered with prior credit, averaging 11.62 ACC credits and 6.11 AP credits. The cohort's average ACT score was 23, and the average family contribution to tuition was about \$9,000. The student population in the cohort, both with and without prior credit, was 46.2% male, 53.8% female, 11.4% "minority,"² and 54.8% from the greater St. Louis area.

Key Findings

- AP/ACC credits significantly influenced students' ability to persist after one year. Students with prior credit had an 85.6% persistence rate compared to a 69.6% rate for students with no prior credit.
- Students with prior credit earned more college credits at graduation: 136.1 compared to 133, significant at the $p < .01$ level, than students without any prior credit.
- Additionally, the overall college GPA of students with prior credit (3.35) was higher than the overall GPA of students without prior credit (3.12).
- Prior credit also affects students' ability to graduate. Students with prior credit had a graduation rate of 68.8% compared to 49.2% for those without.
- Prior credit does positively affect time to degree; students graduating after 3 years had significantly more prior credits than graduates after 4 years, who also had significantly more prior credits than graduates after 5 years. The linear regression analysis shows a 7.8% reduction in time to graduation between students with both AP and ACC credits (4.16 years) and those with no prior credit (4.51 years).

Program Components

Both AP and ACC programs allow high school students to simultaneously earn both high school and postsecondary credit. Some similarities between the programs include:

- Both AP and ACC credits are earned through coursework taught by *high school teachers for both high school and college credit*, usually at some financial cost to the students. With AP, students are expected to pay to sit for the examinations and the ACC program requires students to pay a reduced tuition rate.
- Both AP and ACC provide *professional development opportunities for high school faculty* offering these courses.
- In both programs, curricula are *aligned with postsecondary curricula in that subject area*.

As AP is a national program and ACC is a local program administered by one university, the programs differ in these regards:

- AP credit is awarded based upon performance on an end-of-course examination, while ACC credit is earned simply by receiving a passing grade.

- ❑ ACC credit is guaranteed at SLU and transferable to select public and private institutions, while many of the nation's colleges and universities grant credit for scores of 3 or better on the AP exams.

Contributing Factors

Rigorous coursework during high school

The classes for both the AP and ACC program are based upon college curricula, usually introductory classes within the subject area. This coursework prepares students academically for success in college classes.

Understanding expectations of college coursework

Coursework during high school that is considered college-level helps students understand what is expected of them in their college classes, both making the transition to postsecondary education smoother and allowing students to feel more confident taking advanced level courses as first-year students.

Study Methodology

This study was a cohort longitudinal study, examining students over time beginning with their enrollment at SLU through a six-year period during which participants either graduated or dropped out. Analysis was primarily a logistic regression between dependent variables of first-year persistence and graduation and independent variables including amount and type of prior credit, student demographics, and students' financial contribution. When time to graduation was considered as a dependent variable, a linear regression was used with the same independent variables. The researcher noted that since studies on persistence and graduation rates are strictly correlational, no causal links could be established.

Funding

Program Funding

AP courses are offered free of charge to high school students, but students usually have to pay to take the AP examinations. Some schools and school districts offer limited scholarships to cover the cost of the examinations for students who qualify for free or reduced-price lunch. ACC credits come at the price of \$50 per credit hour paid by the student.

Evaluation Funding

This research was initially conducted as a self-funded dissertation. As the researcher then served as the

Director of the Office of Enrollment and Academic Research at SLU, he used his findings to assist the university's enrollment management personnel. The findings later became the basis for the article published in the *Journal of College Student Retention*.

Geographic Area

This study's population included all students at SLU in St. Louis, Missouri. A portion had earned their prior credit either through AP credits available in many high schools or through high schools in the greater St. Louis area offering the ACC program.

Information from

Delicath, T. (1999). The influence of dual credit programs on college students' integration and goal attainment. *Journal of college student retention*, 14, 377–393.

ACC website:

<http://www.slu.edu/colleges/AS/1818acc/>

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Notes

¹ ACC admissions standards require a student to be either a high school junior or senior, have a 3.0 GPA, have a guidance counselor or principal recommendation, and have teacher approval for each course.

² Minority is defined by the researcher as "African American, Native American, or Hispanic."